

Claims

- 1 1. Method for producing a fuel injection nozzle for an internal combustion
2 engine, comprising the steps of:
3 - providing a nozzle body in which a valve needle with a stop is displaceably disposed,
4 - providing a nozzle holder in which a pressure pin is displaceably disposed, and
5 - providing a disk-shaped stop element in a region between the nozzle body and the
6 nozzle holder,
7 - axially tensioning the nozzle body and the nozzle holder against one another in such
8 a way that the stop element forms a first sealing surface which bears on a nozzle
9 holder section, and a second sealing surface which bears on a nozzle body section, and
10 - producing at least one cutout in the two sealing surfaces in a single manufacturing
11 operation.
- 1 2. Method according to Claim 1, wherein the cutout is punched, drilled and/or
2 stamped.
- 1 3. Method according to Claim 1, wherein the cutout extends all the way through
2 the stop element from the first to the second sealing surface.
- 1 4. Method according to Claim 1, further comprising the step of deepening the
2 cutout by a predetermined axial depth in the first and the second sealing surface.
- 1 5. Method according to Claim 1, wherein the cutout has a circular, oval or
2 polygonal shape.
- 1 6. Method according to Claim 1, further comprising the step of providing the
2 cutout in the edge region of the stop element.

1 7. Fuel injection nozzle for an internal combustion engine, comprising:
2 - a nozzle body in which a valve needle with a stop is displaceably disposed ,
3 - a nozzle holder in which a pressure pin is displaceably disposed, and
4 - a disk-shaped stop element which is provided in a region between the nozzle body
5 and the nozzle holder, wherein
6 - the nozzle body and the nozzle holder being axially tensioned against one another in
7 such a way that the stop element forms a first sealing surface which bears on a nozzle
8 holder section, and a second sealing surface which bears on a nozzle body section,
9 wherein the first and the second sealing surfaces each incorporate at least one cutout
10 for the purpose of increasing the contact pressure of the sealing surfaces, and wherein
11 the bilateral cutouts being implemented evenly opposite one another in the sealing
12 surfaces.

1 8. Fuel injection nozzle according to Claim 7, wherein the cutout extends all the
2 way through the stop element from the first to the second sealing surface.

1 9. Fuel injection nozzle according to Claim 7, wherein the cutout is deepened by
2 a predetermined axial depth in the first and the second sealing surface.

1 10. Fuel injection nozzle according to Claim 7, wherein the cutout has a circular,
2 oval or polygonal shape.

1 11. Fuel injection nozzle according to Claim 7, wherein the cutout is provided in
2 the edge region of the stop element.

1 12. Method for manufacturing a fuel injection nozzle for an internal combustion
2 engine, comprising the steps of:
3 - disposing a valve needle with a stop displaceably within a nozzle body,
4 - disposing a pressure pin displaceably within a nozzle holder,
5 - providing a disk-shaped stop element in a region between the nozzle body and the
6 nozzle holder,
7 - axially tensioning the nozzle body and the nozzle holder against one another in such
8 a way that the stop element forms a first sealing surface which bears on a nozzle
9 holder section, and a second sealing surface which bears on a nozzle body section, and
10 - producing at least one cutout in the two sealing surfaces in a single manufacturing
11 operation.

1 13. Method according to Claim 12, wherein the cutout is punched, drilled and/or
2 stamped.

1 14. Method according to Claim 12, wherein the cutout extends all the way through
2 the stop element from the first to the second sealing surface.

1 15. Method according to Claim 12, further comprising the step of deepening the
2 cutout by a predetermined axial depth in the first and the second sealing surface.

1 16. Method according to Claim 12, wherein the cutout has a circular, oval or
2 polygonal shape.

1 17. Method according to Claim 12, further comprising the step of providing the
2 cutout in the edge region of the stop element.